

WHAT IS CLAIMED IS:

1. A method of treating a sample in a vacuum processing chamber, comprising the steps of:

providing a cassette table, for mounting a cassette in which plural samples are stored, disposed under atmospheric pressure;

supplying said cassette to said cassette table using one of a mechanical transfer and a manual transfer;

carrying in the sample from said cassette to the vacuum processing chamber through a lock chamber;

treating the sample in said vacuum processing chamber; and

carrying out said treated sample to said cassette through said lock chamber.

2. A method of treating a sample in a vacuum processing chamber according to claim 1, wherein said mechanical transfer is performed by a mechanical transferring means.

3. A method of treating a sample in a vacuum processing chamber according to claim 1, wherein:

said treating in the vacuum processing chamber is carried out by processing the sample in the vacuum processing chamber according to one of recognition of product information which is given to said cassette, information which is sent from an upper rank control apparatus, and an order which is

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said cassette is exchanged with another cassette in which unprocessed samples are stored; and

said cassette is exchanged with another cassette in which unprocessed samples are stored; and

while
- after carrying out the exchange of said cassette
with ^{said} another cassette, a processing of samples in ~~said~~
^{a third} another cassette is carried out.

5. A method of treating a sample in a vacuum processing chamber according to claim 4, wherein the sample is carried in and is treated one by one.

6. A method of treating a sample in a vacuum processing chamber according to claim 3, wherein the sample is carried in and is treated one by one.

7. A method of treating a sample in a vacuum processing chamber according to claim 1, wherein the sample is carried in and is treated one by one.

while after exchanging said cassette with said another cassette, carrying out processing of samples in ^{a third} ~~said another~~ cassette.

10. A method of treating a sample in a vacuum processing chamber according to claim 8, wherein said mechanical transfer is performed by a mechanical transferring means.

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13. A method of treating a sample in a vacuum processing chamber according to claim 8, wherein the sample is carried into the vacuum processing chamber and is treated therein one by one.

placing a transferred cassette on a cassette table
which is disposed under a cassette transferring atmospheric
pressure;

vacuum treating the respective carried-in sample
using said respective vacuum processing chamber;

after completing vacuum treating of all samples in the transferred cassette, removing the transferred cassette; and

15. A method of treating a sample contained in a cassette using plural vacuum processing chambers according to claim 14, wherein the plural vacuum processing chambers comprise an etching chamber, a post-processing chamber, and a film-forming chamber.

16. A method of treating a sample contained in a cassette using plural vacuum processing chambers according to claim 14, wherein after vacuum treating the respective carried-in sample using said respective vacuum processing chamber, the treated sample is then vacuum treated in another one of the plural vacuum processing chambers.

17. A method of treating a sample contained in a cassette using plural vacuum processing chambers according to claim 16, wherein the sample is vacuum treated in at least two of the plural vacuum processing chambers in sequence.

18. A method of treating a sample contained in a cassette using plural vacuum processing chambers according to claim 14, wherein the plural vacuum processing chambers include at least one of an etching chamber, a post-processing chamber and a film-forming chamber.

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